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ABSTRACT

One hundred and seven undergraduates enrolled in a self-paced educational psychology course for students preparing to teach in secondary schools were subjects for an experimental module, "Motivating Strategies". Two groups were used: a control group and an experimental group. In the former, teaching preceded video-viewing, and in the latter, it came after the video tapes. Comparisons between the two groups showed no differences, and conclusions were that the module "Motivating Strategies" was ineffective, and that it would be difficult to obtain a modeling effect for such a complex task as motivation with video tapes collected in actual classroom settings. (Author/GO)

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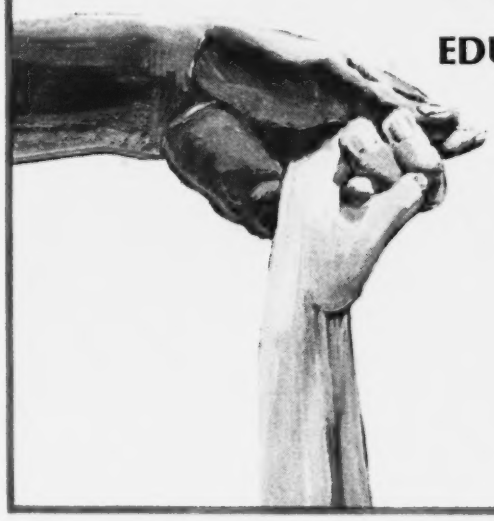

THE RESEARCH AND DEVELOPMENT CENTER FOR TEACHER EDUCATION

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The study reported here was undertaken as a pilot evaluation of the module, "Motivating Strategies." Briefly stated, this module consists of a series of video tapes (including supplementary reading material) of teachers utilizing a variety of techniques to arouse interest and to provide motivating conditions in a natural classroom setting. The module's objective is to provide a source of realistic models for the preservice teacher so that in a microteaching setting, he can increase his ability to interest and provide motivating conditions for his students.

This module was intended as a prototype for a series of instructional skill modules which would draw from a large pool of video recordings made in actual classroom settings. The evaluation of "Motivating Strategies" was intended to demonstrate in part whether such a series

of video tape modules, based on "live" lessons, was realistic.

There is some evidence that imitation of observed behavior patterns can result from viewing models (cf: Bandura & Walters, 1963; Wodtke & Brown, 1967), but these studies have generally used young children as subjects. Some studies of modeling utilizing students preparing to teach have been reported. In a review of these, Young (1969) came to the following conclusions:

> 1. Modeling as a training variable has been demonstrated effective in modifying teaching behavior.
>
> 2. Video-taped models are most effective when a supervisor provides discrimination training while a teacher is viewing or when such discrimination training is provided by the addition of auditory and visual cues on the tape.
>
> 3. Models featuring only positive instances of teaching behavior have been demonstrated to have a greater transfer to teaching situations other than the one in which training occurred.
>
> 4. Listening to an audio-taped model with a typescript and subsequently verbalizing the model teacher's indirect verbal behavior effected significant behavior changes in the predicted direction.

"Motivating Strategies" differs from other modeling treatments in two important ways. First, the purpose of the module is to provide models of a variety of behaviors from which the teacher can select one or a combination of several to practice in a microteaching laboratory. The criterion is not only how often the teacher employed a set of behaviors, but whether through his use of them, he achieved the objective (to obtain student interest in the lesson).

"Motivating Strategies" also uses actual lessons to provide models. Studies of modeling effects in teacher preparation typically use a "constructed" lesson (Young, 1969), that is, one that has been rehearsed and refined so that behaviors that distract from or interfere with the skill to be learned are eliminated. However, the increasing use of video tape recording in the schools and in research on teaching provides an alternate source of models; i.e. actual rather than constructed lessons. From a large pool of video taped lessons,

those appropriate for a particular skill can be obtained. This was the source of models for the module "Motivating Strategies."

Relevant parts of five lessons were used in this module, each one illustrating particular motivating strategies. These were shown to students, and the subsequent microteaching behavior of these students was compared to that of a group of students who did not view the video taped lessons.

The evaluation of the module consisted of a comparison of the two groups' lessons on two measures:

(1) Rated effectiveness in eliciting student interest.

(2) Extent of use of the motivating strategies demonstrated on the video tapes.

METHOD

Instructional Materials Selection:

In order to gather examples of different motivating strategies, approximately seventy video tapes of lessons were viewed. These lessons were taped in local public school classrooms. Five lessons of the seventy were selected as being indicative of effective utilization of one or more of six motivating strategies which a teacher might employ. The six selected strategies were: (1) use of visual aids, (2) involvement of students in the activity, (3) attention producing behavior, (4) individualizing instruction, (5) reinforcement, and (6) increasing expectation of success. The relevant parts of the five lessons were dubbed onto a master tape, the master tape having approximately one hour and twenty minutes playing time.

A booklet was prepared for use by the viewer. The booklet consisted of two sections. The first section dealt with the topic of motivation in general and the strategies subjects could expect to see on the tape. The second section contained a synopsis of each lesson followed by three questions. Each synopsis focused on the motivating strategies a teacher would use on the tape and was read before viewing the accompanying lesson. The purpose of each synopsis was to discriminate the relevant from the irrelevant aspects of the teacher's behavior. The three questions, which were to be answered after viewing

each lesson, called for the viewer to rate the effectiveness of the lesson in eliciting student interest, to judge which strategy had been most effective in maintaining student interest, and to rate how effective the lesson would have been had the viewer been a student in that class. These questions had several functions: (1) to refocus the student upon the motivating strategies used by the teacher, (2) to require the student to discriminate the relevant from the irrelevant strategies, and (3) to gather data about preferences for particular strategies.

Subjects were 107 undergraduates enrolled in a self-paced educational psychology course for students preparing to teach in secondary schools. Each subject participated in the experiment after he had completed five of the seven units of the course.

Treatment Administration:

Two treatment groups were used. In both groups, students were told that they would teach a 10-15 minute lesson to a small group of their colleagues, and that the objective of this microteach would be practice ways to motivate their students and interest them in their lesson.

In the experimental group, students viewed the video tapes before microteaching. In the control group, teaching preceded video-viewing. The time between the video-viewing sessions and the micro-teaching sessions ranged between one and three days. All micro-teaching sessions were audio tape recorded.

Students participated in small groups which were randomly assigned to either the experimental or the control condition. Seventy-five subjects were assigned to the experimental condition to provide sufficient N for later analyses of the relations between preference for a strategy during viewing and use of the strategy during teaching; 32 subjects were assigned to the control condition.

RESULTS

The primary types of evaluative data for the module were (1) rated[1]

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[1]Reliability of the individual rater was established using three observers for 20 lessons, and produced an $r_i = .73$, using the analysis of variance procedure given in Winer (1963), pp. 124-32.

effectiveness of the experimental (module viewing) students' lessons in eliciting student interest, compared to the lessons taught by the control group, and (2) a comparison of the two groups' average frequency of use of the different motivating strategies. The two groups did not differ on either of the comparisons. Summary data for these comparisons are shown in table 1.

Table 1

Rated interest and number of strategies used in experimental and control groups.

Variable	Experimental (n=75) Mean	S.D.	Control (n=32) Mean	S.D.	t
Rated interest	3.41[a]	0.82	3.59	1.13	-.92 (N.S.)
Number of strategies used	1.79	1.56	1.50	1.41	1.14 (N.S.)

[a]Highest rating of interest = 1; lowest = 6.

Although there were no differences between the groups in the number of strategies used, it was considered possible that certain of the video tapes provided better imitative models than others. If so, then the experimental group might be expected to utilize a particular motivating strategy more than the control group. However examination of the use of the individual strategies produced no significant differences between the two groups.

A reasonable objection to the inability of the module to produce significant differences could be that the microteaching setting was unfamiliar to the students in this study. Thus, situational factors (e.g. anxiety) might have mitigated the effectiveness of the treatment so that any differences between the experimental

and the control group were masked by the students' reactions to their first teaching experience. To test this explanation a sub-group of students who had previous experience with microteaching were compared. There were 14 students in the experimental group and 12 students in the control group who had six or more microteaching experiences in another course. All the statistical comparisons described previously were made for these two groups. However, none of these comparisons were significantly different.

Discussion

The obvious conclusion to be drawn from this evaluation is that the module "Motivating Strategies" is ineffective. While there are many possible reasons for this, two appear to stand out as most important.

First, at least one study (Young, 1968) has indicated that video tapes even when accompanied by written instructions are insufficient to produce the desired learning. However, when accompanied by auditory or visual cues to help the viewer discriminate the relevant from the irrelevant, the modeling effect occurred. "Motivating Strategies" contained no such cues, although it was expected that the questions following each lesson would serve to require the student to discriminate the strategy he viewed as effective (examination of the preference data did indicate considerable agreement among the viewers about which strategies were effective). Apparently mere identification of the strategy does not provide for sufficient discrimination or reinforcement whereas auditory or visual cues do. It may also be that requiring the student to verbalize the model's behavior and receive subsequent feedback would be a more sufficient procedure, and one particularly worth exploring for video tapes obtained from classrooms.

A second possible factor may be that the task itself is too complex for a modeling treatment, and must be subdivided into component behaviors, each of which should be learned separately. In this module, six different types of motivating strategies were utilized, in five lesson excerpts, and therefore probably formed competing sets of stimuli, rather than functioning as a distinguishable group from which the student might select.

Finally the null results obtained in this evaluation do not mean that modeling effects cannot be produced. Rather, the evaluation indicates that it will be difficult to obtain a modeling effect for such a complex task as motivation, with video tapes collected in actual classroom settings.

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